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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,406	05/19/2000	Daniel H. Greene	D/A0041	7909

7590  
John E Beck  
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10/25/2004

EXAMINER

CHANG, JON CARLTON

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/574,406	GREENE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jon Chang	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,9-12,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-6,8,13-17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/2/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Applicants' Amendment and Arguments***

1. The amendment filed July 2, 2004, has been entered and made of record.

The amendments to the drawings are approved. The objection to the drawings is withdrawn.

Applicants' arguments with regard to claims 8, 19 and 13, on page 18, first and second paragraphs of the response, have been fully considered and are persuasive.

The rejections of these claims are therefore withdrawn.

Applicants' arguments with regard to claim 1 have been fully considered, but are not considered persuasive for at least the following reasons. On page 17, second through last paragraphs, Applicants argue that Nagaishi's dictionary is not an event library. Specifically, Applicants argue that Nagaishi's dictionaries do not include rules or transformations. While the Examiner agrees, the Examiner points out that claim 1 does not recite rules or transformations. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner invites Applicants to add language regarding the rules and transformations to claim 1 in order to obviate the rejection.

***Claim Rejections - 35 USC § 112***

2. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 18 has been amended to indicate that the rewrite module performs dynamic programming to perform decoding. This does not agree with the originally filed specification. Page 16, second full paragraph, of the specification appears to indicate that the decode module performs the dynamic programming for decoding.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 10 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 5,748,807 to Lopresti et al. (hereinafter "Lopresti") and U.S. Patent 6,219,449 to Nagaishi.

Regarding claim 1, Lopresti discloses a method for decoding image data for a hardcopy document, comprising:

recording a scanned representation of the hardcopy document (column 7, lines 6-7) that includes a primary set of symbol data and a secondary set of encoding data (column 6, lines 41-58); the primary set of symbol data providing a first channel of human readable information rendered on the hardcopy document (column 6, lines 41-

46); the secondary set of encoding data providing a second channel of machine readable information rendered on the hardcopy document (column 6, lines 51-58);

receiving a decoded form of the scanned representation of the hardcopy document from a decoding module to define a candidate set of symbol data (column 7, lines 11-13); and

rewriting, independent of the decoding module, the candidate set of symbol data using the secondary set of encoding data (column 7, lines 27-31; column 9, lines 29-33).

Lopresti does not disclose an event library identifying likely failures encountered when the scanned representation of the hardcopy document is decoded. However, this is well known in the art. For example, Nagaishi teaches as prior art a dictionary for recognition of characters which are likely to have recognition errors. Nagaishi's dictionary is an event library, the characters in the dictionary being the "events" and the dictionary being the "library". Nagaishi indicates that the dictionary provides the advantage of improving recognition (column 1, lines 29-30). Note further that Lopresti indicates that typical misinterpretation errors are taken into account (column 7, lines 65-67). Therefore, it would have been obvious to one of ordinary skill in the art to utilize an event library in Lopresti's method.

Claim 10 is drawn to an apparatus corresponding to the method of claim 1. A discussion similar to that presented above for claim 1 is applicable to claim 10. Claim 11 is similar to claim 10, except that it recites a scanner, instead of a means for recording. Lopresti discloses a scanner (Fig.1, element 16).

With regard to claim 12, Lopresti discloses the apparatus according to claim 11, further comprising a module for decoding the secondary set of encoding data for use by the rewrite module (column 8, lines 33-35).

5. Claims 7, 9, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lopresti, Nagaishi and U.S. Patent 5,594,809 to Kopec et al. (hereinafter "Kopec").

Regarding claims 7 and 18, Lopresti does not disclose that the decoding module performs dynamic programming to decode the scanned representation of the hardcopy document. However, Kopec discloses a decoder based on dynamic programming for decoding (column 44, lines 49-52). Kopec's dynamic programming possesses inherent advantages with regard to decoding. Given this, and Lopresti's suggestion of using dynamic programming (column 10, lines 26-27), it would therefore have been obvious to one of ordinary skill in the art to utilize a decoding module which performs dynamic programming in Lopresti's system.

Regarding claims 9 and 20, Lopresti does not disclose that the decoded form of the scanned representation includes certainty estimates of the candidate set of symbol data. However, this is well known in the art. Kopec teaches likelihood measurements for the decoded image (column 45, lines 27). This is, in essence, certainty estimates. In modifying Lopresti's system according to Kopec (note previous discussion), it would have been further obvious to one of ordinary skill in the art to employ certainty estimates because it would provide improved decoding.

***Allowable Subject Matter***

6. Claims 2-6, 8, 13-17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jon Chang  
Primary Examiner  
Art Unit 2623

Jon Chang  
October 19, 2004